

State of Louisiana
Department of Transportation and Development (DOTD)
Materials and Testing Section Qualification Procedure
for
Qualified Products List 71

**QUALIFICATION PROCEDURE
FOR
REINFORCING STEEL MILLS**

The purpose of this qualification procedure is to insure that reinforcing steel conforms to the latest specification requirements of the Louisiana Department of Transportation and Development (LA DOTD). The Construction Fabrication Section and Materials & Testing Section will be responsible for performing and maintaining this qualification procedure. A current LA DOTD Qualified List for approved reinforcing steel mills will be maintained by the Materials and Testing Section.

MATERIAL SPECIFICATION REFERENCE:

DOTD Standard Specifications, Supplemental Specifications and Special Provisions, Subsection 1009.01 (a).

DEFINITIONS:

Reinforcing steel is specified in this qualification procedure as Billet-Steel (deformed, plain) Bars which conform to ASTM A 615.

PRELIMINARY REQUIREMENTS:

1. Qualified Mill Evaluation Form

A reinforcing steel mill shall submit a standard "Qualified Mill Evaluation Form" (copy attached) to the DOTD Construction Fabrication Section Coordinator listed below, along with a letter requesting qualification for the Qualified Mill List.

2. Mill Information

Include all pertinent information about the reinforcing steel mill (AMRL inspection report for the mill laboratory, types and grades of reinforcing steel to be furnished, contact personnel, physical mill location, etc.) to the Construction Fabrication Section Coordinator.

3. Certification and/or Test Reports

Submit a notarized certificate of analysis reporting actual test results of the material properties of each product tested.

4. Prequalification Meeting

A prequalification meeting will be scheduled between the mill and a Construction Fabrication Section representative to review the qualification process.

5. Inspection

The Construction Fabrication Section Representative will perform inspection of the following:

- * Production - Production will include yard, melt shop, mill, and finishing. The hot rolling of the bar will be observed for specification compliance. Bar will be checked to determine if it has been rolled from billets identified by a heat number. Finished reinforcing steel will be checked for traceability from melt or smelt through each subsequent phase of manufacture.
- * Storage Facility - A check of material storage for finished reinforcing steel will be performed to assure compliance with applicable requirements.
- * Material Identification - Heat numbers, lot numbers, coil numbers, etc., will be checked for compliance with the applicable requirements, as will the mill markings on deformed reinforcing steel.
- * Shipping Records - Shipping records and associated documentation will be reviewed for completeness and accuracy.
- * Quality Control (QC) - LA DOTD will conduct an in-depth review of the laboratory facility, chemical testing, physical testing, and generation of Mill Test Reports (MTR), by checking:
 - The Quality Control Laboratory actively participates in the quality control of steel production.
 - The calibration records on all testing equipment used to test reinforcing steel.
 - The sampling rates and testing frequency for reinforcing steel.
 - The chemical analysis of reinforcing steel for compliance with the applicable specification.
 - The physical testing of reinforcing steel for compliance with the applicable specification.
- * Documentation - The documentation and records maintained by the mill to support MTRs will be checked.

- * MTR - All reinforcing steel furnished for LA DOTD use shall be accompanied by an MTR, certified as correct by a person who can legally bind the mill. The MTR shall show:
 - . Applicable specification number and year of issue.
 - . Physical and chemical properties of the materials as required by the applicable specification.
 - . Heat number, lot/run number, etc. (Identification number).
 - . Origin of the materials and of the manufacturing processes.

6. Comparison Sampling and Testing:

- * Sampling and comparison testing shall be done for each size and grade produced.

Two sets of comparison samples shall be obtained by splitting an 8 ft. Section in half:

 - . The first set to be tested by the mill, and
 - . The second set to be tested by the LA DOTD Materials & Testing Section. The mill shall be responsible for obtaining all samples selected by the LA DOTD Construction Fabrication Section representative.
- * Testing - The mill's samples shall be tested for physical properties by the mill's testing laboratory. Testing shall be witnessed by the LA DOTD Construction Fabrication Section representative. Test results for samples tested at the mill shall be recorded on the LA DOTD worksheet.
- * Samples (to be furnished at no cost to the Department) - The mill shall be responsible for packaging and shipping the second set of test samples to LA DOTD Materials & Testing Section for comparison testing. The LA DOTD worksheet, with a representative MTR attached, shall be included with the shipment.

7. Evaluation of Test Results:

- * Samples tested at the Producing Mill Laboratory -
 - . If the first set of samples meets the required physical properties, the second set of samples shall then be sent to the LA DOTD Materials & Testing Section laboratory along with a completed worksheet, for testing.
 - . If the first set of samples fails to meet the required physical properties, the second set of samples shall not be submitted to the LA DOTD Materials & Testing Section laboratory for testing.

. In the event the first set of samples fails to meet the required physical properties, two additional samples of the same size and grade from different heats (other than the failing heat) shall be sampled for comparison testing. Failure of either additional heat, when tested at the mill will temporarily stop the qualification process. Sampling and testing will continue only after satisfactory adjustment to production or Quality Control has been made.

* Samples tested at the LA DOTD Materials & Testing Section Laboratory -

. If the companion samples meet the required physical properties, the test results will be used as information to determine the acceptability of the mill.

. If the companion samples fail to meet the required physical properties, two additional samples of the same size and grade from different heats (other than the failing heat) shall be sampled for comparison testing. Failure of either additional heat, when tested at the LA DOTD Materials & Testing Section laboratory, will temporarily stop the qualification process. Sampling and testing will continue only after satisfactory adjustment to production or Quality Control has been made.

RESPONSIBILITIES:

The LA DOTD Construction Fabrication Section will be responsible for mill inspection and qualification process.

The LA DOTD Materials and Testing Section will be responsible for physical testing for source approval and verification testing on reinforcing steel samples and maintain a current list of approved reinforcing steel mills.

The qualification process requires the producing mills to meet the minimum requirements of applicable specifications. Mills shall be qualified by the LA DOTD prior to furnishing reinforcing steel for LA DOTD use.

GENERAL:

Upon completion of the evaluation, the mill will be notified in writing concerning the results of the evaluation/inspection and whether the mill will or will not be added to the Qualified Products List Mill List. The Department reserves the right to reevaluate any Mill at any time. Mill approval may be granted based on the Department's satisfaction that reinforcing steel being produced conforms with Departmental specifications. Approval of a reinforcing steel mill will be for a period of one year. Requalification will occur on an annual basis.

Mills which do not comply with the LA DOTD requirements will not be approved to furnish reinforcing steel for state projects. The mill must show evidence of correction of all deficiencies before being considered for qualification and approval.

Other Requirements for approved Mills are as follows:

1. Effective Quality Control Program:

The mill's quality control program shall be sufficient to insure that the finished reinforcing steel possesses uniform characteristics within the Department's specification. An accurate record of test results representing a specific production period shall be maintained by the mill.

2. Provide Quarterly Mill Samples:

The quarterly mill sample will be a representative sample of the production of reinforcing steel for each quarter. All comparison samples shall be adjacent pieces of deformed bars. The reinforcing steel mill shall submit quarterly mill samples of each size and grade produced to the DOTD Materials and Testing Section Coordinator.

Two sets of comparison samples for each quarter shall be obtained; if the first set tested by the mill meets specification, the second set will be sent to LA DOTD Materials & Testing Section for verification testing.

If no steel is produced during any quarterly period, the Manufacturer representative shall send a letter to both DOTD Coordinators.

3. Maintain a list of authorized Mill Representatives:

All approved mills shall submit and maintain a list of representatives authorized to sign documents pertaining to Mill Test Report of reinforcing steel.

4. Allow periodic Inspections by Department Personnel:

The Department may conduct periodic inspections of mill facilities with emphasis on sampling and testing procedures, at the Department's discretion. If the mill inspection is undertaken, the inspector shall have entry at all times to such parts of the mill as may concern the manufacturing, sampling, and testing of reinforcing steel, and shall also have the cooperation and assistance of mill personnel during the inspection.

5. Provide Mill test report(s) for each shipment:

Reinforcing steel intended for use on state projects: a mill test report (including Heat Number for identification and traceability) shall accompany all shipments of reinforcing steel intended for use on state projects. Steel shipped to the job site from supplier/fabricator shall be accompanied with mill test report(s). The mill test report shall be signed by an authorized mill representative.

RANDOM SAMPLING AND TESTING FROM PROJECTS:

Sampling and testing of qualified products for project acceptance will not be required if the LA DOTD field inspector can identify the reinforcing steel listed on the Qualified Products List Qualified Mill List and the accompanied Mill Test Report for each shipment. The Department, however, reserves the right to sample any material should it be questionable for verification.

DISQUALIFICATION:

The Department reserves the right to remove from the Qualified Mill List any approved reinforcing steel mill found to be in violation of the specifications or at any time confidence is lost in a mill's ability or intent to produce reinforcing steel of uniform characteristics complying with Departmental specifications.

Reasons for disqualification of an approved reinforcing steel mill shall include, but not limited to, the following:

- . Failure to comply with the conditions, procedures, and requirements of this qualification procedure.
- . Falsifying information on a mill test report.
- . Failure of the mill to provide quarterly mill samples in accordance with this qualification procedure.
- . Failing test results obtained by the Materials & Testing Section on consecutive quarterly mill samples or project verification samples.
- . Failure to consistently produce reinforcing steel meeting the requirements of the specification.

REQUALIFICATION:

A reinforcing steel mill which has been disqualified and removed from the Qualified Mill List will be considered for requalification by submitting a written request to the Materials Engineer Administrator for requalification indicating the causes and solutions to the problem areas which caused removal, and satisfying all of the requirements shown herein.

After examination of the information gained from above, at the Materials Engineer Administrator's discretion, this requalification process may begin no earlier than one year from the date of removal. Expenses associated with the requalification will be borne by the producing mill.

FAILURE TO FURNISH MATERIAL:

If a mill fails to furnish reinforcing steel to LA DOTD projects during the qualification period, its name will be removed from the LA DOTD approved list when the qualification has expired. Future qualification will be considered by Construction Fabrication Section and Materials and Testing Section after the mill has proven it will be furnishing reinforcing steel to LA DOTD projects.

**DOTD CONSTRUCTION FABRICATION
SECTION COORDINATOR:**

Jay McCain, P.E.
Structural/Marine Fabrication Engineer
DOTD Construction Fabrication Section
P. O. Box 94245
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(225) 379-1563

**DOTD MATERIALS & TESTING
SECTION COORDINATOR:**

Khiet H. Ngo, P.E.
Physical Test Engineer
DOTD Materials and Testing Section
5080 Florida Blvd.
Baton Rouge, La. 70806
(225) 248-4134

Approved 03-03-2003

N. D. HOOD, P.E.
Materials Engineer Administrator

Ident No. _____ Date _____
Mill Source Code ____ Date _____
Lab No. _____
For DOTD Use Only

State of Louisiana
Department of Transportation and Development

QUALIFIED MILL EVALUATION FORM

FOR QPL 71

Information for Evaluation Purposes

Date: _____

Mill (Company Name): _____

Address: _____
Street/ P.O. Box City State Zip Code

Mill's Representative: _____

Address: _____
Street/ P.O. Box City State Zip Code

Phone Number: (____) _____

Material composition (Generic Description): _____

Meets Requirements of Following Specifications:

AASHTO _____ ASTM _____ Fed. SPEC. _____ Others _____

Background Description of Company: _____

Additional Information: _____

General Notes:

1. All test materials will be furnished by the Mill at no cost to the Louisiana Department of Transportation and Development.
2. Incomplete Qualified Mill Evaluation Forms and /or erroneous information furnished as part of this form will result in the Mill being rejected for certification.
3. The Department reserves the right to re-certify the mill at anytime.

The mill is hereby notified that the Louisiana Department of Transportation and Development reserves the right to release or distribute any of the information included in or attached to this form and the results obtained as part of our laboratory testing and field inspection/evaluation. The Louisiana Department of Transportation and Development will not consider any mill for qualification until this form is completed, signed by an authorized official of the mill and returned to the address below:

Louisiana Department of Transportation and Development
Structural Fabrication Unit
P. O. Box 94245
Baton Rouge, LA 70804-9245

Signed: _____

Name: _____
(Please Type)

Title: _____

Address: _____

Date: _____